

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	1319815	filter	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:39
2	BRS	L2	36329	transfer\$3 adj (drum\$1 or roller\$1 or platent\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:41
3	BRS	L3	3736	1 and 2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:41
4	BRS	L4	3417111	liquid or fluid	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:41
5	BRS	L5	2117	3 and 4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:42
6	BRS	L6	3320178	applicat\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:42
7	BRS	L7	1850	5 and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:43
8	BRS	L8	6839308	surface	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:43

	Type	L #	Hits	Search Text	DBs	Time Stamp
9	BRS	L9	1791	7 and 8	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:43
10	BRS	L10	5615929	remov\$3 near "10" l(liquid or fluid)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:45
11	BRS	L11	279219	remov\$3 near 10 (liquid or fluid)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:45
12	BRS	L12	410	9 and 11	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2005/10/27 18:45

DETAILED ACTION

1. Applicant's Amendment and Response to the Office Action mailed 5-10-5 has been entered and made of record .

Claim Objections

2. Claim 1 and 2 are objected to because of the following informalities: In claim 1, line 6, it appears that "second" should be substituted with --first--; in claim 1, line 8, after "sintering", and in claim 2, the last two lines, after "applying" and "drying" deletion of "of" is suggested for correctness. Appropriate correction is required.

Claim Rejections - 35 USC, § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(a) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al. (USPN 5938797, hereinafter "Fujiwara") in view of Sano et al. (JPN 7-282802, hereinafter "Sano").

Referring to Figs. 2a, 3, and related text, Fujiwara discloses a method of making a capacitor element used for a solid electrolyte capacitor, the method comprising the steps of forming, on an anode chip 1 of valve metal, a dielectric layer 4, a first solid electrolyte layer of manganese dioxide 5, a graphite layer 7a and a metal layer 8a in this order, wherein the method further comprises the step of forming a second solid electrolyte layer 6 between the step of forming the first solid electrolyte layer and the step of forming the graphite layer, the second solid electrolyte layer being formed by applying and sintering of an aqueous manganese nitrate solution containing graphite powder (See col. 4, lines 10-33).

But it fails to disclose expressly the manganese nitrate aqueous solution containing 0.5-2.0wt% of graphite powder.

However, the missing limitation is well known in the art because Sano discloses this feature (See Constitution).

A person of ordinary skill is motivated to modify Fujiwara with Sano to obtain excellent moldability and prevention of peeling off.

Therefore, it would have been obvious to combine Fujiwara with Sano to obtain the invention as specified in claim 1.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara in view of Hanawa et al. (USPN 5938798, hereinafter "Hanawa").

Referring to Figs. 2a, 3, and related text, Fujiwara discloses a method of making a capacitor element used for a solid electrolyte capacitor, the method comprising the steps of forming, on an anode chip of valve metal 1, a dielectric layer 4, a solid electrolyte layer manganese dioxide 5, a first graphite layer 7a and a metal layer 8a in this order, wherein the method further comprises the step of forming a second graphite layer 6 between the step of forming the solid electrolyte layer and the step of forming the first graphite layer, the step of forming the second graphite layer includes applying a graphite solution and drying of the applied solution (see col. 4, lines 10-51).

But it fails to disclose expressly the graphite solution containing 5-10wt% of manganese dioxide powder. However, the missing limitations are well known in the art because Hanawa discloses solid electrolyte of graphite material containing manganese dioxide (See col. 7, lines

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29-59). In the combined teaching of Fujiwara and Hanawa it would have been obvious to have a second electrolyte layer with gradually increasing graphite concentration between the manganese dioxide 5 and graphite layer 7a, including portion with 5-10wt% of manganese dioxide powder, to have better adhesion.

A person of ordinary skill is motivated to modify Fujiwara with Hanawa to obtain capacitor with improved characteristics .

Therefore, it would have been obvious to combine Fujiwara with Hanawa to obtain the invention as specified in claim 2.

Response to Amendment

5. In view of Applicants' cancellation of the claim, the rejection of claim 3 under 35 U.S.C. 103, as stated in the indicated Office Action is rendered moot.

Applicant's arguments with regard to the rejections under 35 U.S.C. 103 have been fully considered, but they are not deemed to be persuasive for at least the following reasons.

Applicants argued that Fujiwara limits the graphite concentration to .5-50 wt %. The examiner disagreed. The above range is only an example, Fujiwara does not claim any range of graphite concentration, this indicates that there are no limitations concerning the amount of graphite usable with the disclosed method.

Applicants argued that Hanawa disclose the graphite concentration in the range 1-15%. The examiner disagreed, the range of 1-15% is disclosed to be used with MnO₂ powder for pulverization purpose to obtain the desired pulverized mixture, however to the obtained mixture additional graphite is added (see col. 4, last paragraph). As clearly shown in Fujiwara, the concentration of graphite can be up to about 100% (layer 7a) in the combined teaching of Fujiwara and Hanawa.

Applicants also argued that Sano and Hanawa disclose compositions for use with electrodes of batteries, not usable for capacitors. The examiner disagreed, even though capacitors and batteries have some differences, they operate under the same electrochemical principles and the same materials used as electrolytes or electrodes are usable for both batteries and capacitors (see Takeuchi et al. (USPN 6562513) or Mrotek et al. (USPN 5776633)).

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Therefore the combined teaching of the applied references discloses or makes obvious all the limitations of the rejected claims 1-2.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha T. Nguyen whose telephone number is (571) 272-1678. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM, except the first Friday of each bi-week. The telephone number for Wednesday is (703) 560-0528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael S. Lebentritt, can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ha Nguyen
Primary Examiner
10- 26 - 05